

REMARKS

The Office Action of March 6, 2002 has been carefully reviewed and the claims amended in light of the Examiner's comments.

Specifically, the Examiner has noted that the features upon which the Applicant relies for distinguishing over Kao are not in the rejected claims. Applicant has therefore amended independent claims 1 and 12 to expressly indicate that the integrated processor system has a "common integrated circuit substrate" holding a "processing unit", "internal systems storage structure" such as "caches, buffers and registers", and an "external memory interface" for connecting to an external memory not on the common substrate. These limitations are supported by paragraph [0032] and by Fig. 2 and its associated description.

The claims have also been amended to indicate that the bootstrap program executes to "determine a set of parameters needed to communicate with different types of external memory not on the substrate". Expressly stated in the claim is that the integrated processor system makes this determination "without access to external memory" during this determination.

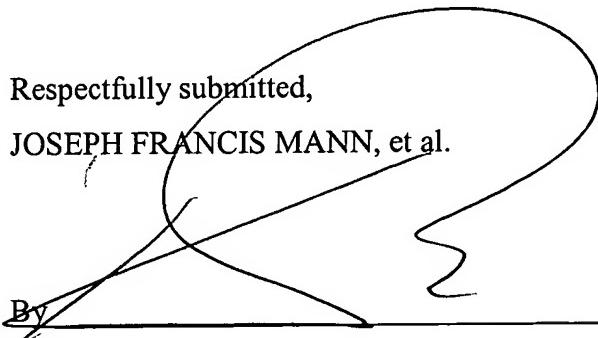
These express limitations distinguish the present invention from Kao. As noted in the Response to the previous Office Action, Kao describes a system comprised of separate integrated circuits for the microprocessor, the cache 56 (acknowledged by the Examiner to be required in Kao for execution of the bootstrap program) and the latch (buffer 64). Importantly, as noted at column 9, lines 21-42, Kao requires communication with the external memory for the execution of the bootstrap program. Further and importantly, Kao does not indicate that the bootstrap program determines parameters needed to communicate with a variety of different memory types.

Because Kao is not contemplating the problems described in the present invention of providing an embedded processor system that may work with different memory types, Kao does not teach or suggest to one of ordinary skill in the art any modifications that would produce the present invention.

Fullam, as noted in the prior Office Action, assumes that the bootstrap program can access external memory during the boot process by using a default mode and thus also fails to teach the limitation of determining external memory parameters without access to the external memory. Further, because in Fullam the external memory can be accessed at all times through the default mode, Fullam teaches away from using internal registers or the like in lieu of the external memory.

Applicant has added two new claims to cover the situation in which the bootstrap memory is also integrated into the single processor per the preferred embodiment. Neither Fullam nor Kao teach placing of the nonvolatile bootstrap memory on the integrated processor system substrate.

Respectfully submitted,
JOSEPH FRANCIS MANN, et al.

A handwritten signature in black ink, appearing to read "JOSEPH FRANCIS MANN, et al.", is written over a large, roughly oval-shaped, open ended bubble. The signature is cursive and somewhat stylized.

Keith M. Baxter
Reg. No. 31,233
Attorney for Applicant
Boyle Fredrickson Newholm
Stein & Gratz, S.C.
250 E. Wisconsin Avenue, #1030
Milwaukee WI 53202
(414) 225-9755